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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. |
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09/046,118    03/20/98    BOICE

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EXAMINER

LM02/0605

KEVIN P RADIGAN  
HESLIN & ROTHENBERG  
5 COLUMBIA CIRCLE  
ALBANY NY 12203-5160

WONG, A  
ART UNIT

PAPER NUMBER

2713

DATE MAILED:

06/05/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

|                              |                               |                              |  |
|------------------------------|-------------------------------|------------------------------|--|
| <b>Office Action Summary</b> | Application No.<br>09/046,118 | Applicant(s)<br>BOICE ET AL. |  |
|                              | Examiner<br>Allen Wong        | Art Unit<br>2713             |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,7,8,10-28 and 31-41 is/are rejected.
- 7) ☒ Claim(s) 3-6,9,29 and 30 is/are objected to.
- 8) ☐ Claims \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. § 119**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All   b) ☐ Some \* c) ☐ None of the CERTIFIED copies of the priority documents have been:
1. ☐ received.
2. ☐ received in Application No. (Series Code / Serial Number) \_\_\_\_.
3. ☐ received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. & 119(e).

**Attachment(s)**

- |   |  |
|---|--|
| 15) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                  | 18) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____.  |
| 16) <input checked="" type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)              | 19) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 17) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>2</u> . | 20) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1, 19, 23, 34 and 37 rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. A "pulsation artifact" is a critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). The term "pulsation artifact" is not understood and thus the term "pulsation artifact" is not disclosed adequately and clearly in the specification and in the claims 1, 19, 23, 34 and 37.

Also, what does "...still picture to appear to be moving" means as disclosed on page 15 of the applicant's specification. How can still pictures move? It is oxymoronic to disclose a still picture having the appearance of movement.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 7, 8, 10-28 and 31-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reininger (5,426,463).

As for claim 23, Reininger discloses a system for encoding a sequence of video frames comprising:

a pre-encode processing unit (fig.2, element 25), said pre-encoding processing unit comprising:

a statistics measurement unit for use in determining whether a current frame of the sequence of frames comprises a still frame (fig.2, element 28 counts the number of bits that allows the determination of whether a current frame of the sequence of frames comprises a still frame or I-picture);

a control unit (fig.2, element 27; note the processor modifies at least the quantization, element 14) for modifying at least one controllable parameter (parameter being bit allocation or quantization step size) employed in encoding said still frame (ie. I-picture) to minimize pulsation artifacts (note that I pictures have a set of variable quantization step to avoid "pulsation artifacts" or distortions as disclosed) between still frames of a sequence of still frames when said statistics measurement unit determines said current frame to comprise said still frame;

and

an encoding engine (fig.2, element 15 is a encode engine that encodes said current frame of the sequence of video frames using the at least one controllable encode parameter set by the pre-encode processing unit, element 25) for encoding said current frame of the sequence of video frames using the at least one controllable encode parameter set by said pre-encode processing unit.

Note claims 1, 2, 14, 19, 20, 31, 34, 35, 37, 38 and 41 have similar corresponding elements.

Although Reininger does not use the terms "pulsation artifact," Reininger discloses similar quantization adjustment that eliminates the "pulsation artifact." Therefore, it would have been obvious to one of ordinary skill in the art to adjust quantization to avoid any type of artifact or distortion that occurs during the encoding process.

Regarding claims 7, 8, 24 and 25, Reininger discloses that still picture (ie. I frame), P frame or B frame types can be determined (col.6, lines 47-54; note fig.2, element 28 counts the amount of data and makes a frame-type determination from the amount of data acquired by the counter of the pre-encoding unit, element 25).

Regarding claims 10, 26 and 39, Reininger discloses that a predictive error can be determined by the "predict" section as shown in fig. 2, element 19.

Regarding claims 11-13, 15-18, 21, 22, 27, 28, 36 and 40, Reininger discloses an I frame adaptive quantization table (fig.4), a P frame adaptive quantization table (fig.6), and a B frame adaptive quantization table (fig.5) for adaptively adjust the quantizing unit's step size so that an appropriately encoding bit rate can be used depending on the type of frame that is being determined so to avoid encoding inaccuracies or "pulsation artifact." Also, Reininger discloses that the pre-encoding unit's processor in figure 2, element 27 is used for the purpose of determining an appropriate quantization level so that a proper bit rate can be employed for encoding (col.6, lines 58-67 and col.7, lines 1-27).

Art Unit: 2713

***Allowable Subject Matter***

Claims 3-6, 9, 29 and 30 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.


***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allen Wong whose telephone number is (703) 306-5978. The examiner can normally be reached on Mondays to Thursdays from 9-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Kelley can be reached on (703) 305-4856.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

AW  
June 1, 2000

  
CHRIS S. KELLEY  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2700